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A Bayesian herd-level diagnostic test evaluation – *Mycoplasma bovis*

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OBJECTIVE

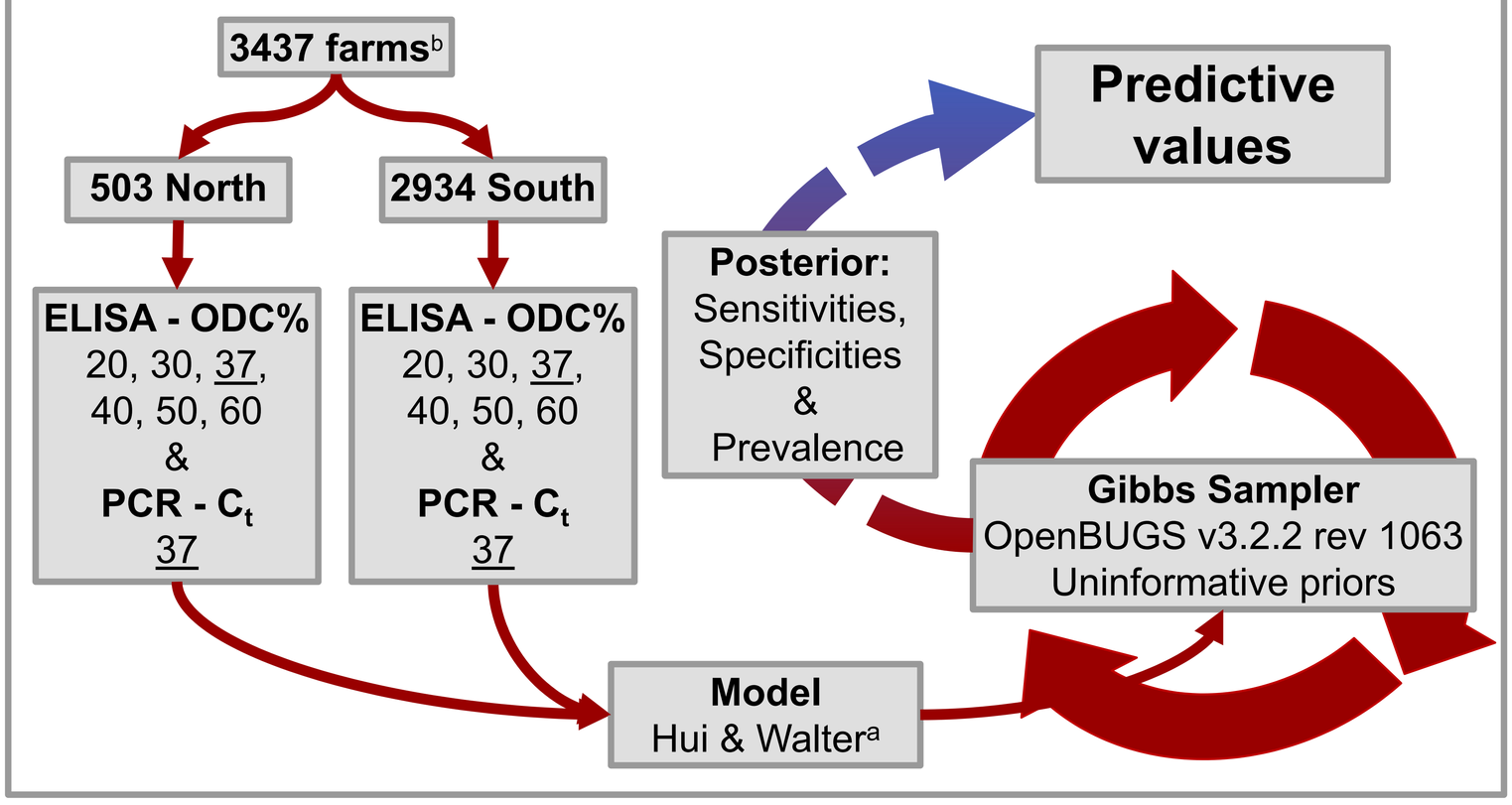
To evaluate the performance, at herd level, of the BIO K 302 ***Mycoplasma bovis*** ELISA against the PathoProof Mastitis-3 PCR.

M. Bovis **causes disease in cattle** of all ages. Recently the prevalence among Danish dairy cattle has increased. A **diagnostic test evaluation** is required to establish a control program.

CONCLUSION

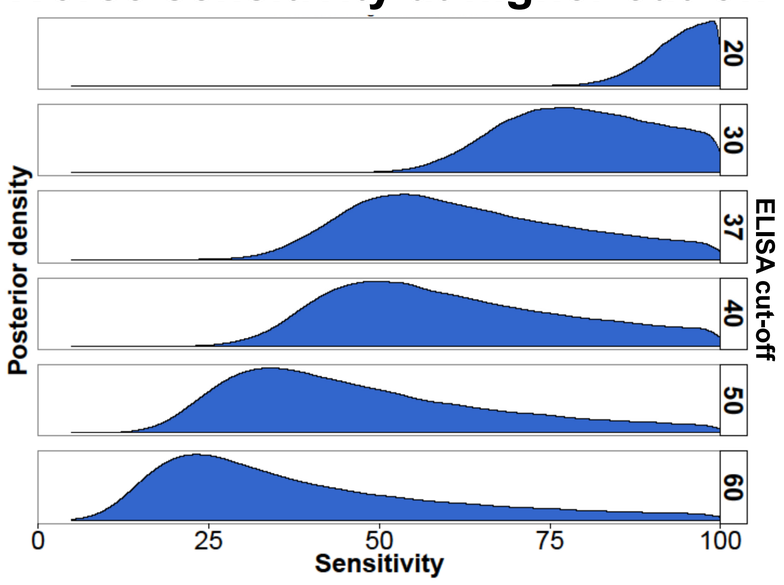
The BIO K 302 ELISA **positive predictive value improves**, at herd level, if the **cut-off is increased**.

BAYESIAN LATENT CLASS ANALYSIS

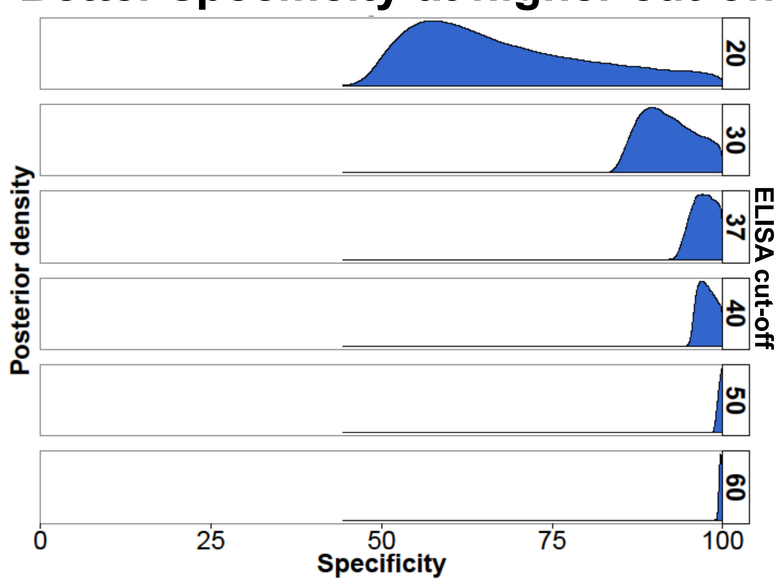


RESULTS

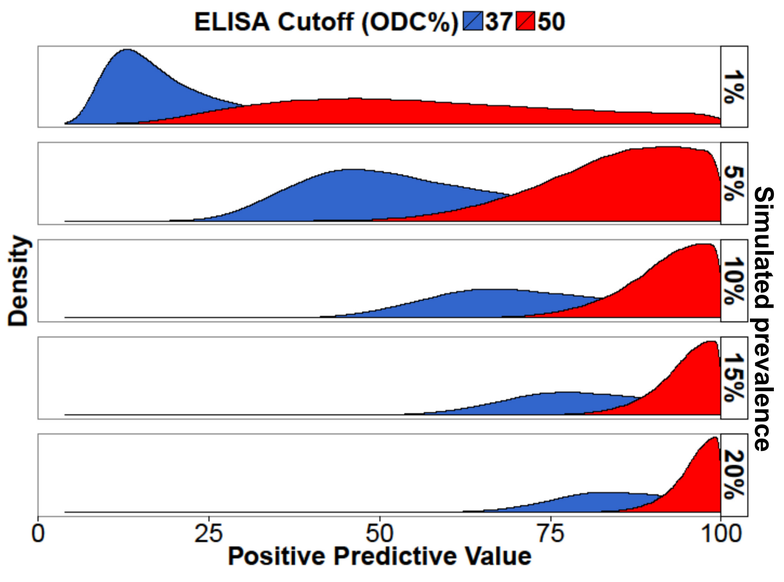
Worse sensitivity at higher cut-off



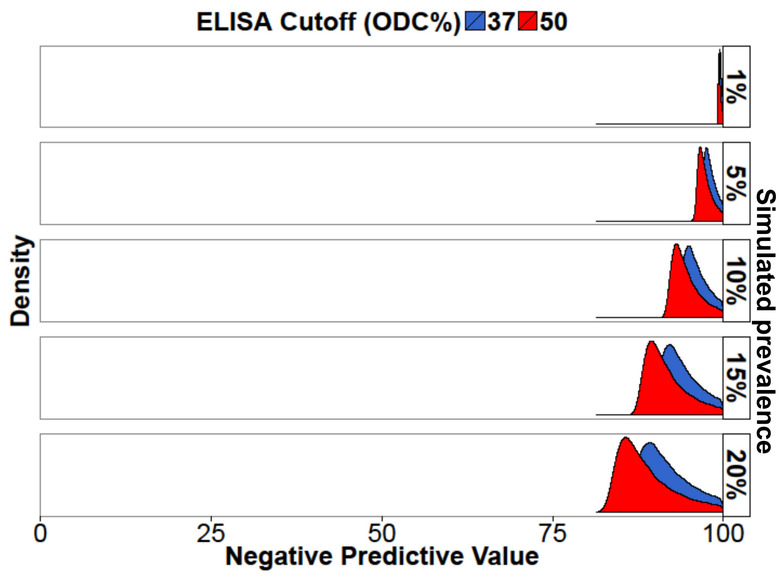
Better specificity at higher cut-off



A high cut-off increases the PPV…



… but reduces the NPV.



a) Hui, S. L., & Walter, S. D. (1980). Estimating the error rates of diagnostic tests. *Biometrics*, *36*(1), 167–71
b) Data were supplied by the Knowledge Centre for Agriculture, Aarhus, Denmark.

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